

LABORATORY DESCRIPTION

General Information

School	Geotechnical Sciences
Department	Forest and Natural Environment Sciences

Title of the Laboratory – Acronym

Geomorphology, Edaphology and Riparian Areas – GERi Lab

Head of the Laboratory

George N. Zaimes

Short Description

GERi Lab wishes to become a pioneer in innovative, science-based and applied research in the fields of geomorphology, edaphology and riparian area management. Emphasis is given to fluvial geomorphology and more specifically on water erosional processes, nonpoint source pollutants and best management and conservation practices. A main interest, is also the functions and management of intermittent and ephemeral streams and torrents. The ecosystem services of riparian areas and other semi-aquatic ecosystems (wetlands and deltas) are also being researched along with the urban, agricultural and other anthropogenic impacts and best management practices for these ecosystems. Overall, **GERi Lab** promotes integrated water resources management, ecosystem-based and ecohydrological approaches and nature-based solutions in Greece and the Mediterranean region. The implementation of these approaches is done by incorporating innovative technologies such as hydrologic models and UAVs. The goal is to apply best management and conservation practices with targeted approaches. Another key characteristic is the stakeholders' involvement following a bottom up approach that leads to more applied methods and solutions. Climate change is altering the hydrologic cycle and its implications are being studied with an emphasis on floods and droughts. Finally, through its research **GERi Lab** hopes to contribute to the Water Energy Food NEXUS.

Members of the **GERi Lab** are active players in the UNESCO Chair Con-E-ECT, MEdECC, SMIRES and the Mountain Partnership and teach in the MSc programs “Man and Water” and “Analysis and Management of Anthropogenic and Natural Disasters.” **GERi lab** has and is involved in many national and international research projects (e.g. Streams-2-Suppress-Fires, Map-Erosion, MEST, ECOMED, WaSec) and has established collaborations with universities and organizations from all continents of the world.